In the U.S. Patent and Trademark Office
Patent Examining Operation.

Applicant: Eugene Matzan
Appl. No. 10/772,535
Filed: 02/06/2004
For: Systems for Detection of Defects in Railroad Car Wheels
Examiner: Franz F. Jules
Art Unit: 3617
Confirmation No. 5402

To the Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Response to Action dated 06/22/2005

Please amend the claims as indicated on the attached listing entitled"Amended Claims".

Remarks

The rejection of claims 15 and 16 is respectfully traversed. The description and drawings fully support claims 15 and 16 where signals from the sensors are"Signal In"to the power supply as per Fig. 1 and the power supply in Fig. 4 all are fully described in the second paragraph on page 6 of the specifications.

The 35 USC 102 rejection of claims 1 and 4 is moot in that claim 1 in canceled and claim 4 as amended is dependent on claim 2,

The rejection under 35 USC 103 on Maine 4,936,529 in view of Mian 6,523,411 and Hallberg 4,702,104 is respectfully submitted to be overcome by the amendments to the claims.

Both Maine and Mian are irrelevant to the claimed invention since they relate to microwave/radio frequency detection and provide no guidance to the skilled in the art to the use of acoustical/sound vibration detectors. There is no impetus for combining these patents with Hallberg since they use different detection modalities than Hallberg uses. Thus, their combination would not suggest itself to one skilled in the art.

Applicant's invention provides significant patentable improvement over Hallberg in the following respects:

a) Teaching the use of acoustically isolated rail sections
b) Limiting the length of the sections to less than that the distance covered by half rotation of the railroad wheel

c) Use of acoustical signals over the full range, not just the range above 100 Hz.
d) Using frequency domain conversion rather than a complex digital processing technique; applicant specifically uses an FFT device (claim 5) to get the spectrum

a) and b) improves signal processing and reduces interference (see last paragraph on page 1).
b) enables earlier detection of wheel defects--rather than relying on harmonic, which manifests defects only after they become catastrophic. Early detection enables taking the car out of service while it can still roll to the repair yard. A test can be completed before a catastrophe, which can shut down the rail line.

Since a system having the forgoing improvements is not foreshadowed by Hallberg, the invention as claimed in the amended claims, let alone the features of the dependent claims, would not have seen obvious to anyone skilled in the art, the allowance of applicant's claims is believed to be in order and is respectfully solicited.

Respectfully submitted,

6 September 2005

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Certificate of Mailing

This response was mailed to the above address by 1st class US mail on 6 September 2005 by the undersigned.

Alexander E. Martens